

WHAT IS CLAIMED IS:

1. A digital broadcasting system comprising
a digital broadcasting transmission apparatus for broadcasting
data groups; and
5 a digital broadcasting receive apparatus for receiving said
data groups directly or indirectly through a data distribution
part,
wherein
said digital broadcasting transmission apparatus has a
10 transmission means for multiplexing and broadcasting ordinary
data to be broadcasted as present programs and index data
defined as identification information of data broadcasted in
past or to be broadcasted in future.
- 15 2. A digital broadcasting system of Claim 1, wherein
said index data includes a data ID of the data broadcasted
in past or to be broadcasted in future, and a remote memory
location from which the data can be downloaded.
- 20 3. A digital broadcasting system of Claim 1 or 2, wherein
said digital broadcasting transmission apparatus adds
distinctive identifiers individually to said ordinary data and
said index data.
- 25 4. A digital broadcasting system of Claim 1, 2 or 3, wherein
said digital broadcasting receive apparatus has a data
separation means for identifying said ordinary data and said
index data separately among the received data groups of digital
broadcasting.
- 30 5. A digital broadcasting system of Claim 4, wherein
aid digital broadcasting receive apparatus has a judge

means for determining whether an original data are downloaded in the apparatus itself or not by referring to an data ID in said received index data.

- 5 6. A digital broadcasting system of Claim 5, wherein said digital broadcasting receive apparatus is a mobile terminal, and has a download request means for allowing to select the necessity for downloading by displaying index data of an original data not downloaded yet.
- 10 7. A digital broadcasting system of Claim 6, wherein said mobile terminal has a transmission means for putting out contents requested by said download request means, and a receive means for receiving digital broadcasting contents or
- 15 download data selectively.
8. A digital broadcasting system of Claim 7, wherein said transmission means adds and puts out said requested contents with a public-key used exclusively for an individual
- 20 user or an individual terminal.
9. A digital broadcasting system of Claim 1, 2 or 3, wherein said digital broadcasting receiver is an information relay apparatus (hereinafter referred to as "information
- 25 service station"), and has a data receive means for receiving said digital broadcasting contents, and a data memory means for storing said ordinary data and said index data separately among received data groups.
- 30 10. A digital broadcasting system of Claim 9, wherein said information service station has an input means for accepting a download request;

5 a data management means for referring to an index data
corresponding to requested data in case that said data memory
means does not contain requested data, and directing said
requested data to be retrieved from a remote memory location
specified by said index data; and
a distribution means for transmitting download data to a
requester.

10 11. A digital broadcasting system of Claim 10, wherein
said information service station has a security management
means for encrypting said download data by using a cipher key
specified by said requester.

15 12. A digital broadcasting system of Claim 10 or 11, wherein
said information service station transmits a
verification information for verifying a fact that said
requester obtains an distributed information along with said
download data, and acknowledges a response to said verification
information, and processes a billing operation.

20 13. A mobile terminal embedding a computer executing plural
installed software programs such as map navigation comprising
a communication means for receiving digital broadcasting
contents;

25 an input means for accepting an operation input by a user;
an information memory means for storing programs and related
data;

a display means for displaying an execution result of programs
and a operation screen; and

30 a control means for managing a program and data captured from
said communication means and said input means,
wherein said information memory means stores a management

information including an information ID of said programs and data independently of said programs and data themselves.

14. A mobile terminal of Claim 13, wherein
5 when said control means receives an index data including data ID's (number and/or name) of the data already broadcasted or to be broadcasted in the future along with said ordinary data including programs and related data as time division multiplex data of said digital broadcasting contents through said
10 communication means, said control means extracts a data ID's of data not yet downloaded among data covered by said index data by referring to management data stored in said information memory means, and displays data with said display means.
15. A mobile terminal of Claim 13 or 14, wherein
15 said input means has an external media input means allowing an IC card and/or an external memory media to be inserted, and
when a designated memory media is inserted and a download
20 operation is requested by said input means, said management data stored in said information memory means are read out and stored in an inserted memory media.
16. A mobile terminal of Claim 15, wherein
25 said designated memory media is an IC card, and stores a mobile terminal number and/or user number, and a cipher key for download operation.
17. A mobile terminal of Claim 14 or 15, wherein
30 said communication means has a receive channel corresponding to a transmission from a download requester as well as a receive channel for said digital broadcasting, in which those channels

are switched in responsive to an insert operation of said designated memory media.

18. An information service station storing data groups
5 received in a digital broadcasting and distributing data in
responsive to a download request from a mobile terminal, wherein
said information service station obtains an individual cipher
key for said mobile terminal and encrypts data requested for
downloading by said cipher key and sends a encrypted data to
10 a requester.

19. An information service station of Claim 18, wherein
a management information including data ID's (number and/or
name) of stored data and an internal memory location are stored;
15 and
the data ID's and index data, which are received along with
ordinary data as said digital broadcasting data, including
external data memory locations for data already broadcasted or
to be broadcasted in the future are stored as management data.

20. An information service station of Claim 19, wherein
said cipher key is obtained from an output of a transmission
means of a mobile terminal as a cipher key described in Claim
8.

21. An information service station of Claim 19, wherein
said cipher key is obtained from an IC card for a mobile terminal
as a cipher key described in Claim 16.

22. An information service station of Claim 21, wherein
a data ID of data already downloaded by said mobile terminal
and stored in said IC card and said management information are

